FEDERAL COMMUNICATIONS COMMISSION

William F. Caton
Acting Secretary

APPENDIX A

Amendments to the Rules

Parts 15 and 76 of Chapter I of Title 47 of the Code of Federal Regulations are amended as follows:

Part 15 RADIO FREQUENCY DEVICES

1. The authority citation for Part 15 is revised to read as follows:

AUTHORITY: Secs. 4, 302, 303, 304, 307 and 624A of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154, 302, 303, 304, 307 and 544A.

2. Section 15.3 is amended by adding a new paragraph (aa) to read as follows:

§15.3 Definitions.

(A) * * *

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(aa) *Cable ready consumer electronics equipment.* Consumer electronics TV receiving devices, including TV receivers, videocassette recorders and similar devices, that incorporate a tuner capable of receiving television signals and an input terminal intended for receiving cable television service, and are marketed as "cable ready" or "cable compatible." Such equipment shall comply with the technical standards specified in Section 15.118 of this chapter.

3. Section 15.19 is amended by adding a new paragraph (d) to read as follows:

§15.19 Labeling requirements.

(A) * * *

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(d) Consumer electronics TV receiving devices, including TV receivers, videocassette recorders and similar devices, that incorporate features intended to be used with cable television service, but do not fully comply with the technical standards for cable ready equipment set forth in Section 15.118 of this chapter, are subject to the following labeling requirements:

(1) Such equipment shall be labeled with an advisory indicating that the device does not fully comply with the Federal Communications Commissions standards for cable ready consumer electronics equipment. The advisory must appear on the device and on its packaging. This requirement applies to consumer TV receivers, videocassette recorders and similar devices manufactured or imported for sale in this country on or after June 30, 1997.

(2) Such equipment shall not be marketed with terminology that describes the device as "cable ready" or "cable compatible," or that otherwise conveys the impression that the device is *fully* compatible with cable service. This requirement applies to consumer TV receivers, videocassette recorders and similar devices manufactured or imported for sale in this country on or after October 31, 1994.

4. Section 15.115 is amended by revising paragraph (c)(1)(*i*) and adding new paragraphs (h) and (i) to read as follows:

§15.115 TV interface devices, including cable system terminal devices.

(A) * * *

* * * * *

(c) * * *

(1) * * *

(i) For a cable system terminal device or a TV interface device equipped for use with a cable system or a master antenna, as defined in paragraph (b)(3) of this section, the isolation between the antenna and cable input terminals shall be at least 80 dB from 54 MHz to 216 MHz, at least 60 dB from 216 MHz to 550 MHz and at least 55 dB from 550 MHz to 806 MHz. The 80 dB standard applies at 216 MHz and the 60 dB standard applies at 550 MHz. In the case of a transfer switch requiring a power source, the required isolation shall be maintained in the event the device is not connected to a power source or power is interrupted. The provisions of this sub-paragraph regarding frequencies in the range 550 MHz to 806 MHz are effective June 30, 1997.

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(h) Stand-alone switches used to alternate between cable service and an antenna shall provide isolation between the antenna and cable input terminals that is at least 80 dB from 54 MHz to 216 MHz, at least 60 dB from 216 MHz to 550 MHz and at least 55 dB from 550 MHz to 806 MHz. The 80 dB standard applies at 216 MHz and the 60 dB standard applies at 550 MHz. In the case of stand-alone switches requiring a power source, the required isolation shall be maintained in the event the device is not connected to a power source or power is interrupted. The provisions of this paragraph are effective June 30, 1997.

(i) Switches and other devices intended to be used to by-pass the processing circuitry of a cable system terminal device, whether internal to such a terminal device or a stand-alone unit, shall not attenuate the input signal more than 6 dB from 54 MHz to 550 MHz, or more than 8 dB from 550 MHz to 806 MHz. The provisions of this paragraph are effective June 30, 1997.'ASection 15.117 is amended by revising paragraph (h) to read as follows:

§15.117 TV broadcast receivers.

(A) * * *

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(h) For a TV broadcast receiver equipped with a cable input selector switch, the selector switch shall provide, in any of its set positions, isolation between the antenna and cable input terminals of at least 80 dB from 54 MHz to 216 MHz, at least 60 dB from 216 MHz to 550 MHz and at least 55 dB from 550 MHz to 806 MHz. The 80 dB standard applies at 216 MHz and the 60 dB standard applies at 550 MHz. In the case of a selector switch requiring a power source, the required isolation shall be maintained in the event the device is not connected to a power source or power is interrupted. An actual switch that can alternate between reception of cable television service and an antenna is not required for a TV broadcast receiver, provided compliance with the isolation requirement specified in this paragraph can be demonstrated and the circuitry following the antenna input terminal(s) has sufficient bandwidth to allow the reception of all TV broadcast channels authorized under this chapter. The provisions of this paragraph regarding frequencies in the range 550 MHz to 806 MHz are effective June 30, 1997.

6. New Section 15.118 is added to read as follows:

§15.118 Cable ready consumer electronics equipment.

(a) All consumer electronics TV receiving equipment marketed in the United States as cable ready or cable compatible shall comply with the provisions of this section. Consumer electronics TV receiving equipment that includes features intended for use with cable service but does not fully comply with the provisions of this section are subject to the labelling requirements of Section 15.19(d).

(b) Cable ready consumer electronics equipment shall be capable of receiving all NTSC or similar video channels in the frequency range 54 MHz to 804 MHz in accordance with the channel allocation plan set forth in the Electronics Industries Association's "Cable Television Channel Identification Plan, EIA IS-132, May 1994" (EIA IS-132). This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 522(a) and 1 CFR Part 51. Copies of EIA IS-132 may be obtained from: Global Engineering Documents, 2805 McGraw Ave., Irvine CA 92714. Copies of EIA IS-132 may be inspected during normal business hours at the following locations: Federal Communications Commission, 1919 M Street, NW, Dockets Branch (Room 239), Washington, DC. or the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC.

(c) Cable ready consumer electronics equipment must meet the following technical performance requirements. Compliance with these requirements shall be determined by performing measurements at the unfiltered IF output port. Where appropriate, the Commission will consider allowing alternative measurement methods.

(1) Adjacent channel interference. In the presence of a lower adjacent channel CW signal that is 1.5 MHz below the desired visual carrier in frequency and 10 dB below the desired visual carrier in amplitude, spurious signals within the IF passband shall be attenuated at least 55 dB below the visual carrier of the desired signal. The desired input signal shall be an NTSC visual carrier modulated with a 10 IRE flat field and the aural carrier should be unmodulated. Measurements are to be performed for input signal levels of 0 dBmV and +15 dBmV, with the receiver tuned to ten evenly spaced channels specified in the EIA IS-132 channel plan.

(2) Image channel interference. Image channel interference within the IF passband shall be attenuated below the visual carrier of the desired channel by at least 60 dB from 54 MHz to 806 MHz. In testing for compliance with this standard, the desired input signal is to be an NTSC visual carrier modulated with a 10 IRE flat field and the aural carrier should be unmodulated. The undesired test signal shall be a CW signal equal in amplitude to the desired visual carrier and located 90 MHz above the visual carrier frequency of the desired channel. Measurements shall be performed for input signals of 0 dBmV and +15 dBmV, with the receiver tuned to ten evenly spaced channels specified in the EIA IS-132 channel plan.

(3) Direct pickup interference. The direct pickup (DPU) of a co-channel interfering ambient field by a cable ready device shall not exceed the following criteria. The ratio of the desired to undesired signal levels at the IF passband on each channel shall be at least 45 dB. The average ratio over the six channels shall be at least 50 dB. The desired input signal shall be an NTSC signal having a visual carrier level of 0 dBmV. The equipment under test (EUT) shall be placed on a rotatable table that is one meter in height. Any excess length of the power cord and other connecting leads shall be coiled on the floor under the table. The EUT shall be immersed in a horizontally polarized uniform CW field of 100 mV/m at a frequency 2.55 MHz above the visual carrier of the EUT tuned channel. Measurements shall be made with the EUT tuned to six EIA IS-132 channels, two each in the low VHF, high VHF and UHF broadcast bands. On each channel, the levels at the IF passband due to the desired and interfering signals are to be measured.

(4) Tuner overload. Spurious signals within the IF passband shall be attenuated at least 55 dB from 54 to 806 MHz below the visual carrier of the desired channel using a comb spectrum input with each signal individually set at +15 dBmV. Measurements shall be made with the receiver tuned to ten evenly spaced EIA IS-132 channels.

(5) Cable input conducted emissions. Conducted spurious emissions that appear at the cable input to the device must meet the following criteria. The input shall be an NTSC video carrier modulated with a 10 IRE flat field at a level of 0 dBmV and with a visual to aural ratio of 10 dB. The aural carrier shall be unmodulated. The peak level of the spurious signals will be measured using a spectrum analyzer connected by a directional coupler to the cable input of the equipment under test. Spurious signal levels must not exceed the limits in the following table:

From 54 MHz up to and including 300 MHz-26 dBmV

From 300 MHz up to and including 450 MHz-20 dBmV

From 450 MHz up to and including 806 MHz-15 dBmV

The average of the measurements on multiple channels from 450 MHz up to and including 806 MHz shall be no greater than -20 dBmV. Measurements shall be made with the receiver tuned to at least four EIA IS-132 channels in

each of the above bands. The test channels are to be evenly distributed across each of the bands. Measurements for conducted emissions caused by sources internal to the device are to be made in a shielded room. Measurements for conducted emissions caused by external signal sources shall be made in an ambient RF field whose field strength is 100 mV/m, following the same test conditions as described in paragraph (c)(3) of this section.

(d) The field strength of radiated emissions from cable ready consumer electronics equipment shall not exceed the limits in Section 15.109(a) when measured in accordance with the applicable procedures specified in Section 15.31 and Section 15.35 for unintentional radiators, with the following modifications. During testing the NTSC input signal level is to be +15 dBmV, with a visual to aural ratio of 10 dB. The visual carrier is to be modulated by a 10 IRE flat field; the aural carrier is to be unmodulated. Measurements are to be taken on six EIA IS-132 channels evenly spaced across the required RF input range of the equipment under test.

Note: The provisions of paragraphs (a) through (d) of this section are effective June 30, 1997.

Part 76 CABLE TELEVISION SERVICE

7. The authority citation for Part 76 is revised to read as follows:

AUTHORITY: Secs. 2, 3, 4, 301, 303, 307, 308, 309, 324A 48 Stat., as amended, 1064, 1065, 1066, 1081, 1082, 1083, 1084, 1085, 1101; 47 U.S.C. Secs. 152, 153, 154, 301, 303, 307, 308, 309, 532, 533, 535, 542, 543, 544A, 552 as amended, 106 Stat. 1460.

8. Section 76.605 is amended by redesignating the existing paragraphs (a)(2) through (a)(12) as paragraphs (a)(3) through (a)(13), and adding a new paragraph (a)(2) and to read as follows:

§76.605 Technical standards.

(a) * * *

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(2) Cable systems shall transmit channels to subscriber premises equipment on frequencies in accordance with the channel allocation plan set forth in the Electronics Industries Association's "Cable Television Channel Identification Plan, EIA IS-132, May 1994" (EIA IS-132). This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 522(a) and 1 CFR Part 51. Cable systems are required to use this channel allocation plan for signals transmitted in the frequency range 54 MHz to 1002 MHz. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 522(a) and 1 CFR Part 51. Copies of EIA IS-132 may be obtained from: Global Engineering Documents, 2805 McGraw Ave., Irvine CA 92714. Copies of EIA IS-132 may be inspected during normal business hours at the following locations: Federal Communications Commission, 1919 M Street, NW, Dockets Branch (Room 239), Washington, DC, or the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC. This requirement is effective on May 31, 1995, for new and re-built cable systems, and on June 30, 1997, for all cable systems.

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9. New Section 76.630 is added to read as follows:

§76.630 Compatibility with consumer electronics equipment.

(a) Cable system operators shall not scramble or otherwise encrypt signals carried on the basic service tier. Requests for waivers of this prohibition must demonstrate either a substantial problem with theft of basic tier service or a strong need to scramble basic signals for other reasons. As part of this showing, cable operators are required to notify subscribers by mail of waiver requests. The notice to subscribers must be mailed no later than thirty calendar days from the date the request waiver was filed with the Commission, and cable operators must inform the Commission in writing, as soon as possible, of that notification date. The notification to subscribers must state:

> On (date of waiver request was filed with the Commission), (cable operator's name) filed with the Federal Communications Commission a request for waiver of the rule prohibiting scrambling of channels on the basic tier of service. 47 C.F.R. Section 76.630(a). The request for waiver states (a brief summary of the waiver request). A copy of the request for waiver is on file for public inspection at (the address of the cable operator's local place of business).
>
> Individuals who wish to comment on this request for waiver should mail comments to the Federal Communications Commission by no later than 30 days from (the date the notification was mailed to subscribers). Those comments should be addressed to the: Federal Communications Commission, Cable Services Bureau, Washington, D.C. 20554, and should include the name of the cable operator to whom the comments are applicable. Individuals should also send a copy of their comments to (the cable operator at its local place of business).

Cable operators may file comments in reply no later than 7 days from the date subscriber comments must be filed.

(b) Cable system operators that provide their subscribers with cable system terminal devices and other customer premises equipment that incorporates remote control capability shall permit the remote operation of such devices with commercially available remote control units or otherwise take no action that would prevent the devices from being operated by a commercially available remote control unit. Cable system operators are advised that this requirement obliges them to actively enable the remote control functions of customer premises equipment where those functions do not operate without a special activation procedure. Cable system operators may, however, disable the remote control functions of a subscriber's customer premises equipment where requested by the subscriber.

(c) Cable operators may not alter the infrared codes used to operate the remote control capabilities of the customer premises equipment they employ in providing service to

subscribers. Cable operators may, however, use new equipment that includes additional infrared codes for new remote control functions that were not included in existing models of customer premises equipment.

(d) Cable system operators that use scrambling, encryption or similar technologies in conjunction with cable system terminal devices, as defined in Section 15.1(e) of this chapter, that may affect subscribers' reception of signals shall offer to supply each subscriber with special equipment that will enable the simultaneous reception of multiple signals. This equipment could include, for example, set-top cable system terminal devices with multiple descramblers/decoders and/or timers, and signal bypass switches.

(1) The offer of special equipment shall be made to new subscribers at the time they subscribe and to all subscribers at least once each year.

(2) Such special equipment shall, at a minimum, have the capability:

(i) To allow simultaneous reception of any two or more scrambled or encrypted signals and to provide for tuning to alternative channels on a pre-programmed schedule; and.

(ii) To allow direct reception of all other signals that do not need to be processed through descrambling or decryption circuitry (this capability can generally be provided through a separate by-pass switch or through internal by-pass circuitry in a cable system terminal device).

(3) Cable system operators shall determine the specific equipment needed by individual subscribers on a case-by-case basis, in consultation with the subscriber. Cable system operators are required to make a good faith effort to provide subscribers with the amount and types of special equipment needed to resolve their individual compatibility problems.

(4) Cable operators shall provide such equipment at the request of individual subscribers and may charge for purchase or lease of the equipment and its installation in accordance with the provisions of the rate regulation rules for customer premises equipment used to receive the basic service tier, as set forth in Section 76.923. Notwithstanding the required annual offering, cable operators shall respond to subscriber requests for special equipment for reception of multiple signals that are made at any time.

(e) Cable system operators shall provide a consumer education program on compatibility matters to their subscribers in writing, as follows:

(1) The consumer information program shall be provided to subscribers at the time they first subscribe and at least once a year thereafter. Cable operators may choose the time and means by which they comply with the annual consumer information requirement. This requirement may be satisfied by a once-a-year mailing to all subscribers. The information may be included in one of the cable system's regular subscriber billings.

(2) The consumer information program shall include the following information:

(i) Cable system operators shall inform their subscribers that some models of TV receivers and videocassette recorders may not be able to receive all of the channels offered by the cable system when connected directly to the cable system. In conjunction with this information, cable system operators shall briefly explain, the types of channel compatibility problems that could occur if subscribers connected their equipment directly to the cable system and offer suggestions for resolving those problems. Such suggestions could include, for example, the use a cable system terminal device such as a set-top channel converter. Cable system operators shall also indicate that channel compatibility problems associated with reception of programming that is not scrambled or encrypted programming could be resolved through use of simple converter devices without descrambling or decryption capabilities that can be obtained from either the cable system or a third party retail vendor.

(ii) In cases where service is received through a cable system terminal device, cable system operators shall indicate that subscribers may not be able to use special features and functions of their TV receivers and videocassette recorders, including features that allow the subscriber to: view a program on one channel while simultaneously recording a program on another channel record two or more consecutive programs that appear on different channels; and, use advanced picture generation and display features such as "Picture-in-Picture," channel review and other functions that necessitate channel selection by the consumer device.

(iii) In cases where cable system operators offer remote control capability with cable system terminal devices and other customer premises equipment that is provided to subscribers, they shall advise their subscribers that remote control units that are compatible with that equipment may be obtained from other sources, such as retail outlets. Cable system operators shall also provide a representative list of the models of remote control units currently available from retailers that are compatible with the customer premises equipment they employ. Cable system operators are required to make a good faith effort in compiling this list and will not be liable for inadvertent omissions. This list shall be current as of no more than six months before the date the consumer education program is distributed to subscribers. Cable operators are also required to encourage subscribers to contact the cable operator to inquire about whether a particular remote control unit the subscriber might be considering for purchase would be compatible with the subscriber's customer premises equipment. Cable operators also may wish to advise subscribers that subscriber-owned remote control units may not be functional if the cable system changes terminal devices.

Note: The provisions of paragraphs (a) and (b) of this section are effective July 31, 1994, and May 31, 1994, respectively. The provisions of paragraphs (c) through (e) of this section are effective October 31, 1994, except for the requirement under section (d)(1)(*i*) for cable system operators to supply cable system terminal devices with multiple tuners, which is effective October 31, 1995. The initial offer of special equipment to all subscribers, as required under paragraph (d) of this section shall be made by October 31, 1994.

APPENDIX B

Parties Filing Comments and/or Reply Comments

Parties Filing Comments

1. American Telegraph and Telephone Company
2. Barden Cablevision
3. Bell Atlantic

4. BellSouth Telecommunications, Inc.

5. Cable-Consumer Electronics Compatibility Advisory Group (The CAG also submitted an Erratum to Appendices C and D of its comments on February 15, 1994)

6. Cable Telecommunications Association, Inc.

7. Cablevision Industries Corporation

8. Cablevision Systems Corporation

9. Christopher A. Catotti

10. Circuit City Stores, Inc.

11. Continental Cablevision, Inc.

12. Cox Cable Communications and Newhouse Broadcasting Corporation

13. Chris Carrier

14. John Fitzgerald

15. General Instrument Corporation

16. Greater Media, Inc.

17. Hewlett-Packard

18. Home Box Office

19. Interactive Multimedia Association

20. Joint Comments of InterMedia Partners, ML Media Partners and ML Media Opportunity Partners (Joint Cable Commenters)

21. Lakes Region Cable Television Consortium

22. Media General Cable of Fairfax County, Inc.

23. Howard N. Meyer

24. Mitsubishi Electronics America, Inc.

25. Multichannel Communications Sciences, Inc.

26. News Datacom, Inc.

27. New York City Department of Telecommunications and Energy

28. O.D. Page

29. Pacific Telesis Group, Pacific Bell and Nevada Bell (Pacific Bell)

30. Sharp Electronics Corporation

31. Sacramento Metropolitan Cable Television Commission

32. Tele-Communications, Inc.

33. Time Warner Entertainment Company, L.P.

34. The Titan Corporation

35. United States Telephone Association

36. Zenith Electronics Corporation

Parties Filing Reply Comments

1. Ameritech

2. Cable-Consumer Electronics Compatibility Advisory Group (The CAG also submitted an Erratum to Appendices C and D of its comments on February 15, 1994)

3. Cable Telecommunications Association, Inc.

4. Cablevision Systems Corporation

5. Comcast Cable Communications, Inc.

6. The Consumer Electronics Group of the Electronics Industries Association

7. Consumer Electronics Retailers Coalition

8. The Consumer Federation of America and the Home Recording Rights Coalition

9. Continental Cablevision, Inc.

10. DIRECTV, Inc.

11. General Instrument Corporation

12. GTE Service Corporation

13. Home Box Office

14. Joint Comments of InterMedia Partners, ML Media Partners and ML Media Opportunity Partners (Joint Cable Commenters)

15. Media General Cable of Fairfax County, Inc.

16. Multichannel Communications Sciences, Inc.

17. National Cable Television Association, Inc.

18. New York City Department of Telecommunications and Energy

19. Nobody Beats The Wiz, Inc.

20. NYNEX Telephone Companies

21. Pacific Telesis Group, Pacific Bell and Nevada Bell (Pacific Bell)

22. Progressive Retailers Organization, Inc.

23. Oregon Consumer League

24. Satellite Broadcasting and Communications Association of America

25. Scottsdale Television Labs

26. Tele-Communications, Inc.

27. Time Warner Entertainment Company, L.P.

28. The Titan Corporation

29. Viacom International Inc.

30. Zenith Electronics Corporation